Figur 1. Effect of the amount of Dowex50Wx8 resin on PEN110 removal from RBCC: Post-column level of PEN110

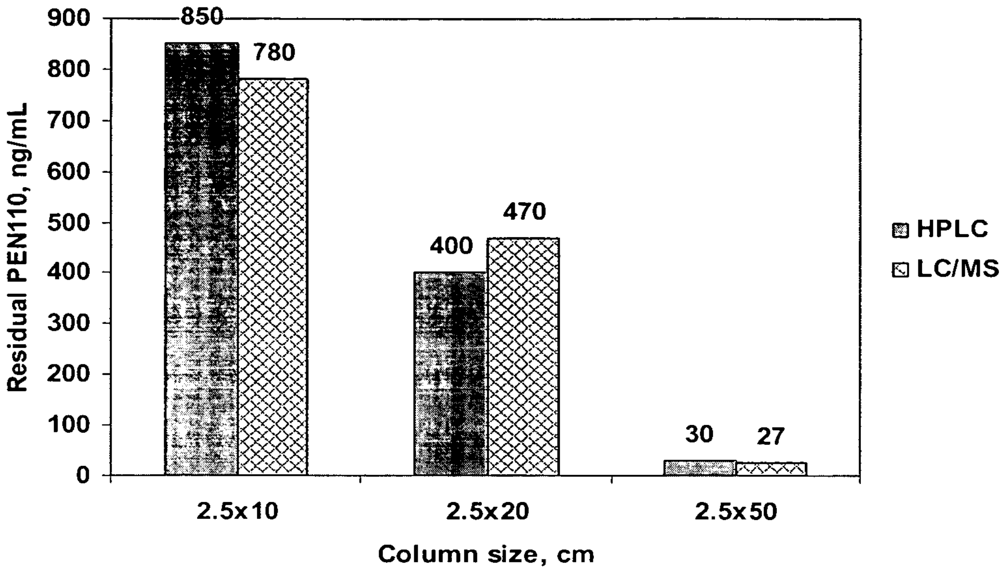
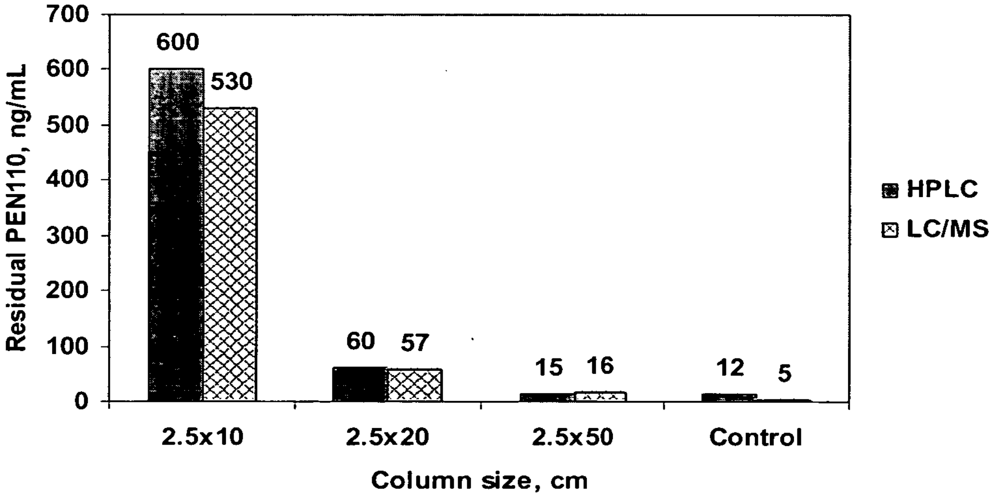


Figure 2. Effect of the amount of Dowex50Wx8 resin on PEN110 removal from RBCC: AMW and AAW (Control) level of PEN110



Figur 3. Effect of column flow rate on PEN110 removal from RBCC: Post-column level of PEN110

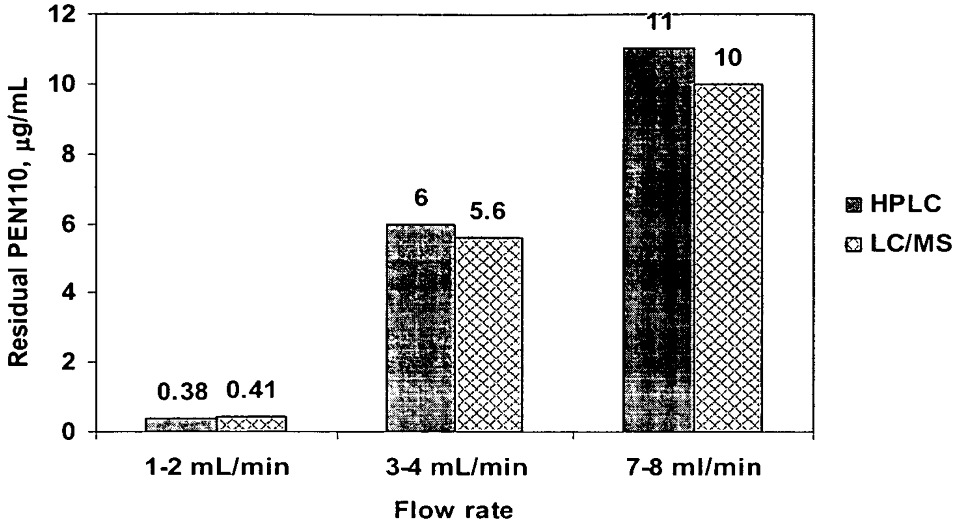


Figure 4. Effect of column flow rate on PEN110 removal from RBCC: AMW and AAW (Control) level of PEN110

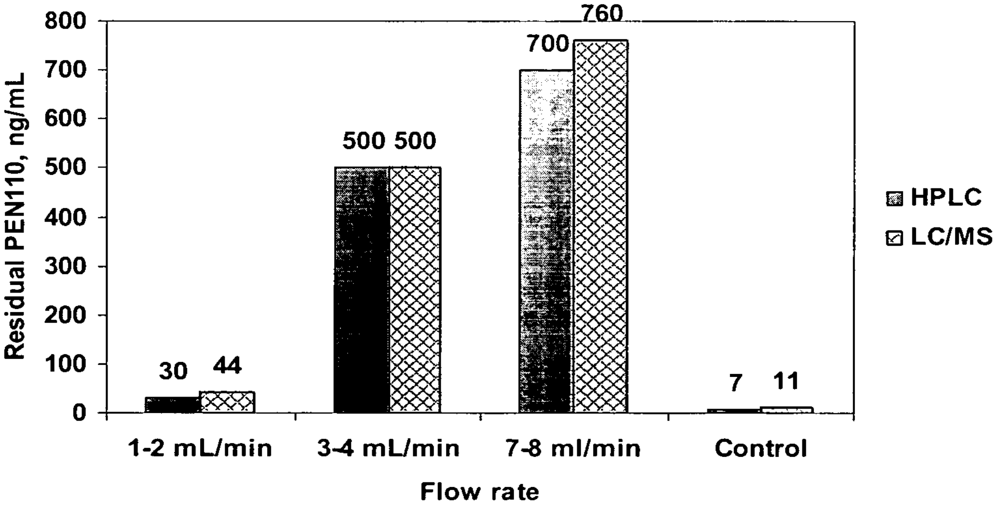


**Figure 5. Effect of temperature on PEN110 removal from RBCC: Post-column level of PEN110**

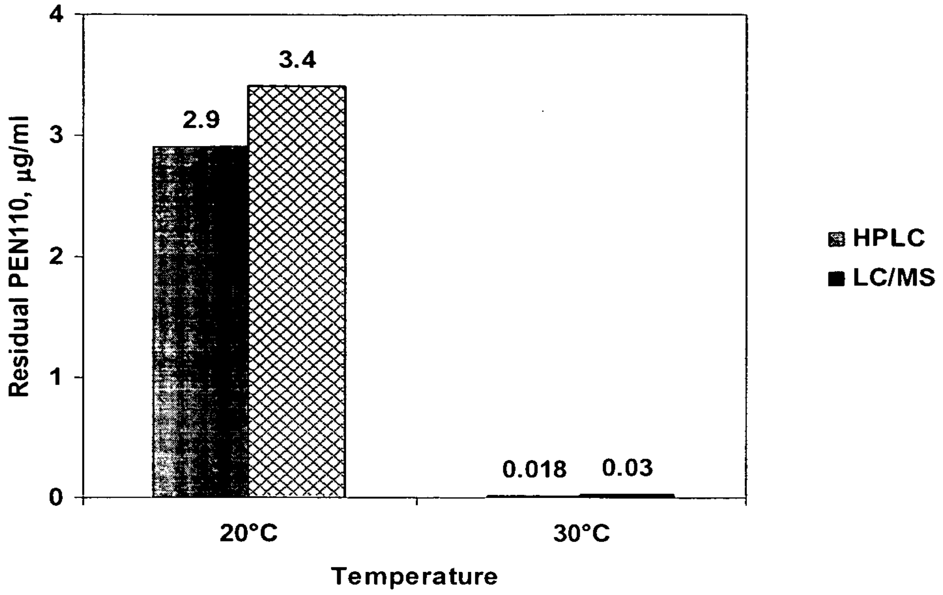


**Figure 6. Effect of temperature on PEN110 removal from RBCC: AMW and AAW (Control) level of PEN110**

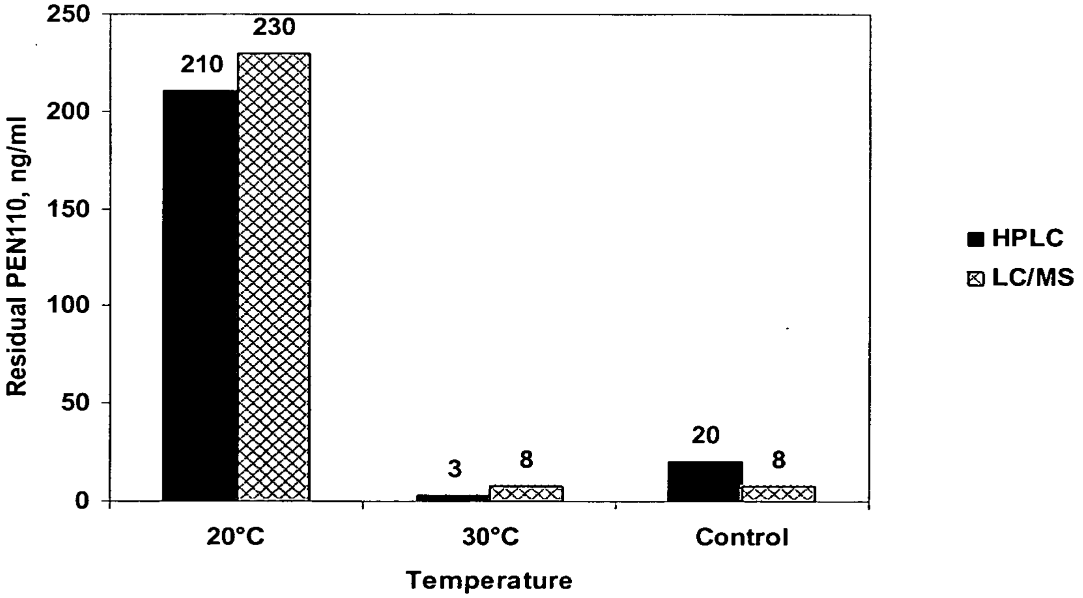


Figure 7. Effect of column configuration on PEN110 removal from RBCC: Post-column level of PEN110

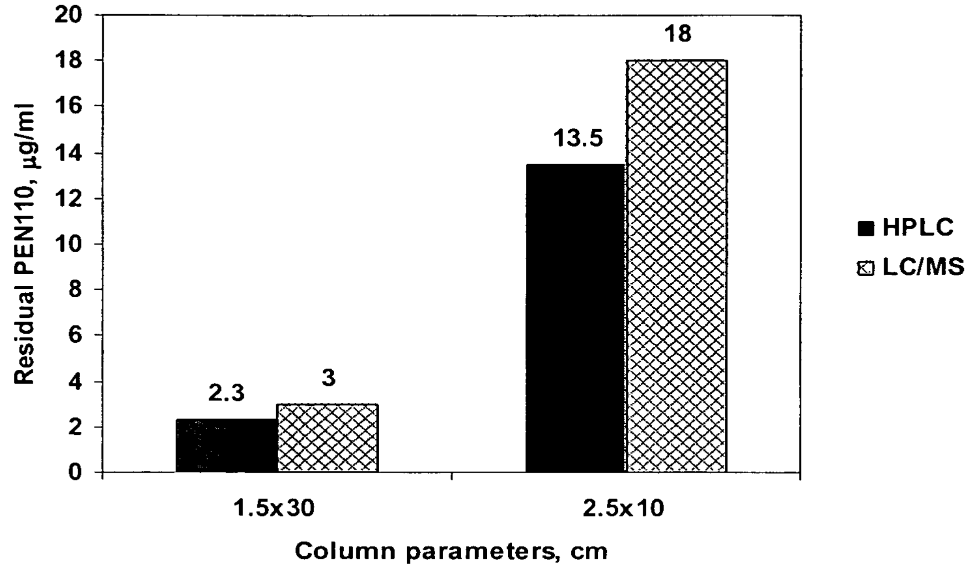


Figure 8. RBCC purified using CE column (Test) or automated washing (Control): Hemolysis level during the storage

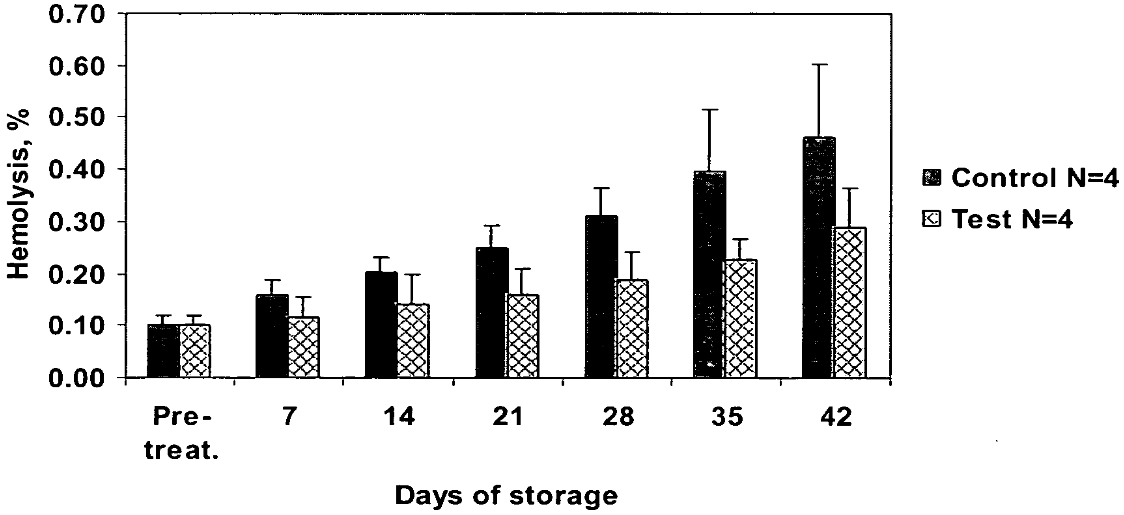


Figure 9. RBCC purified using CE column (Test) or automated washing (Control): ATP level during the storage

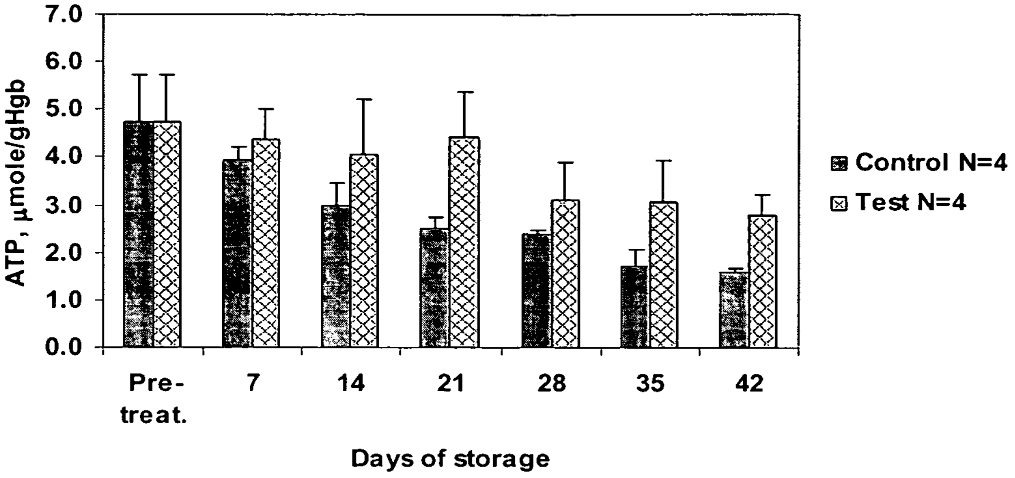


Figure 10. RBCC purified using CE column (Test) or automated washing (Control): Methemoglobin level during the storage

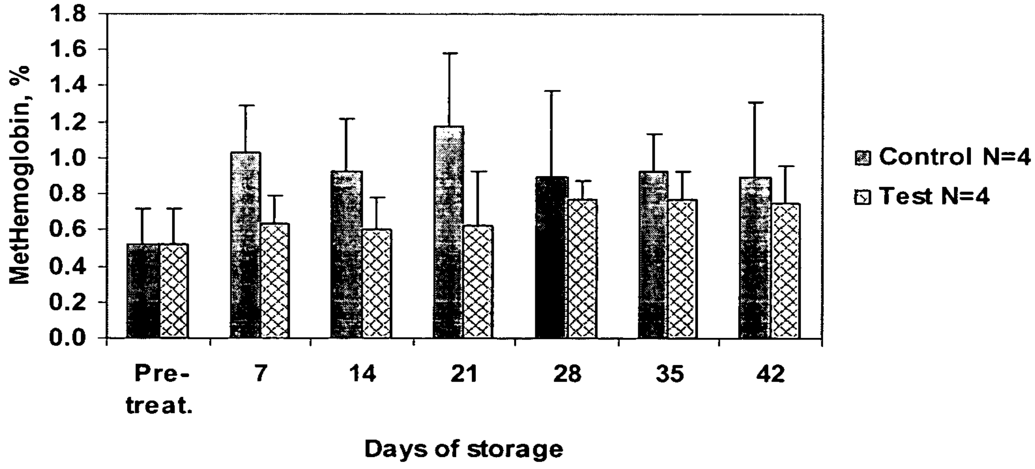


Figure 11. RBCC purified using CE column (Test) or automated washing (Control): Hematocrit during the storage

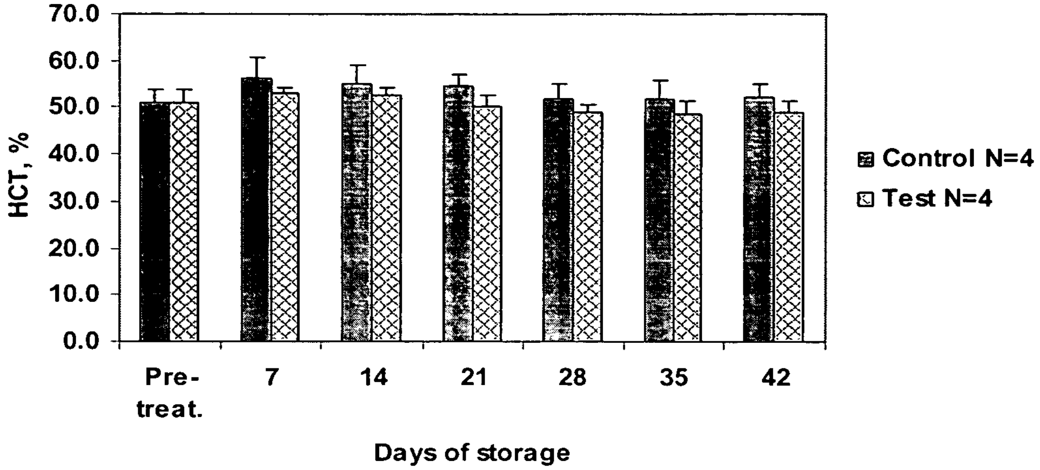


Figure 12. RBCC purified using CE column (Test) or automated washing (Control): Extra-cellular K+ level during the storage

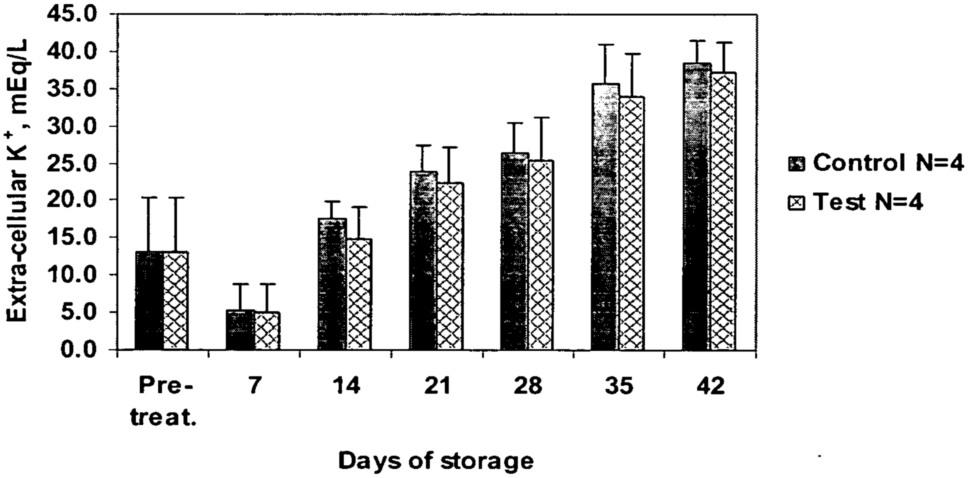


Figure 13. RBCC purified using CE column (Test) or automated washing (Control): Intracellular K$^+$ level during the storage

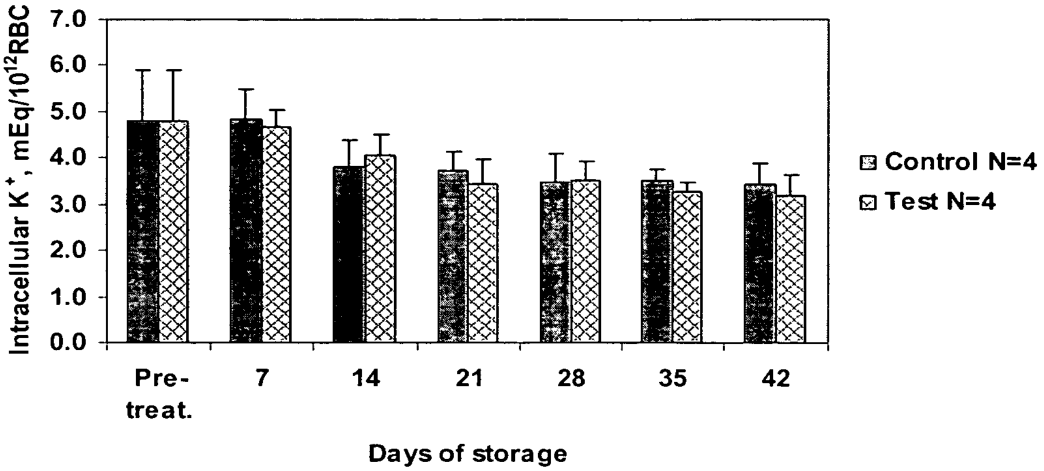


Figure 14. RBCC purified using CE column (Test) or automated washing (Control): RBC mean corpuscular volume (MCV) during the storage

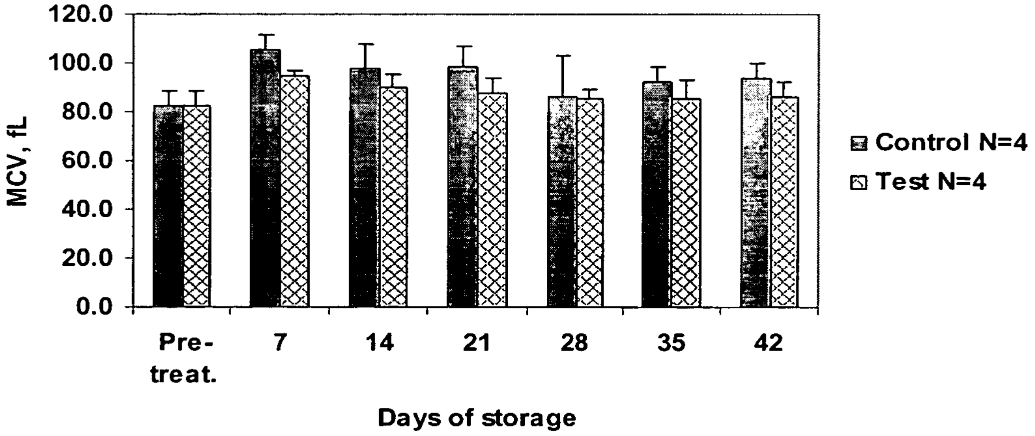


Figure 15. RBCC purified using CE column (Test) or automated washing (Control): pH during the storage

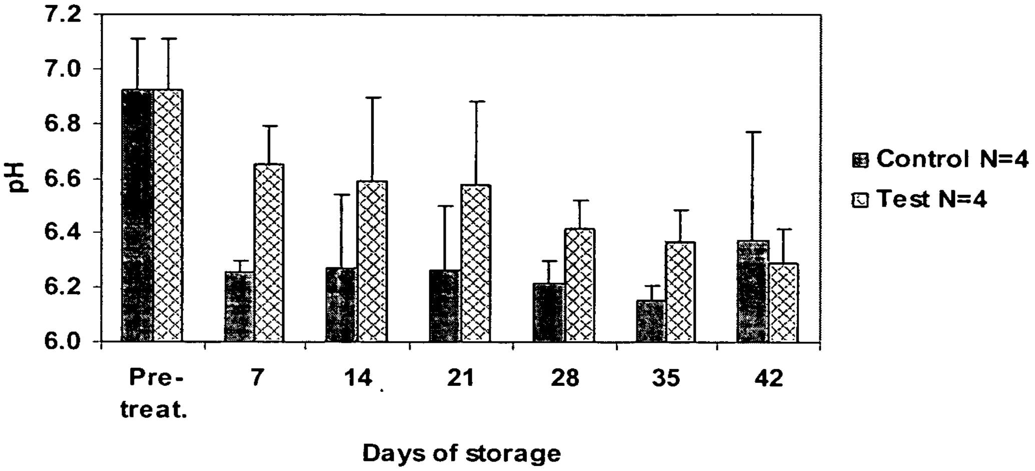


Figure 16. RBCC purified using CE column (Test) or automated washing (Control): Total Hemoglobin level during the storage

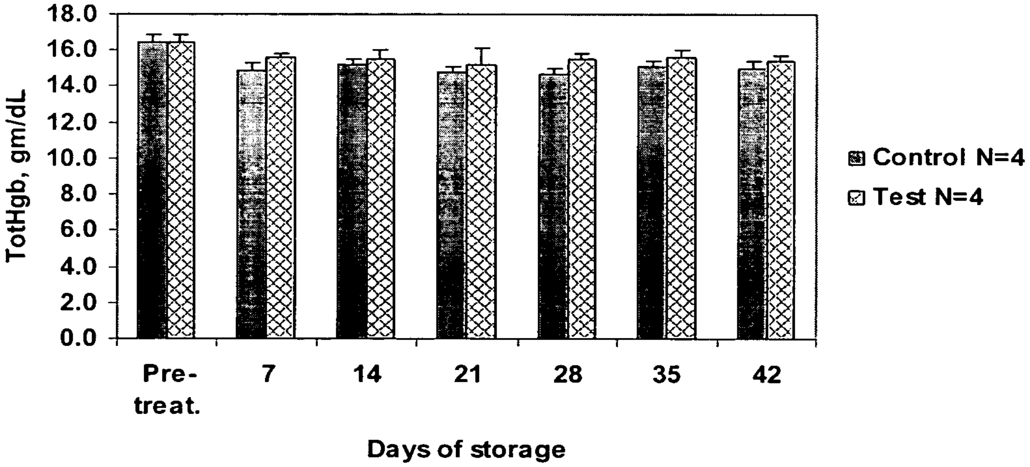


Figure 17. RBCC purified using CE column (Test) r automated washing (Control): M ancellular hemoglobin concentration (MCHC) during the storage

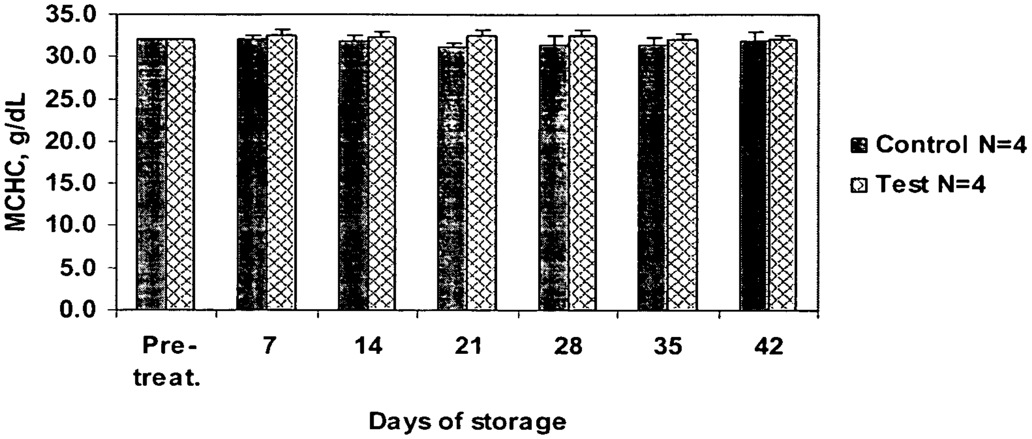


Figure 18. RBCC purified using CE column (Test) or automated washing (Control): Osmolality during the storage

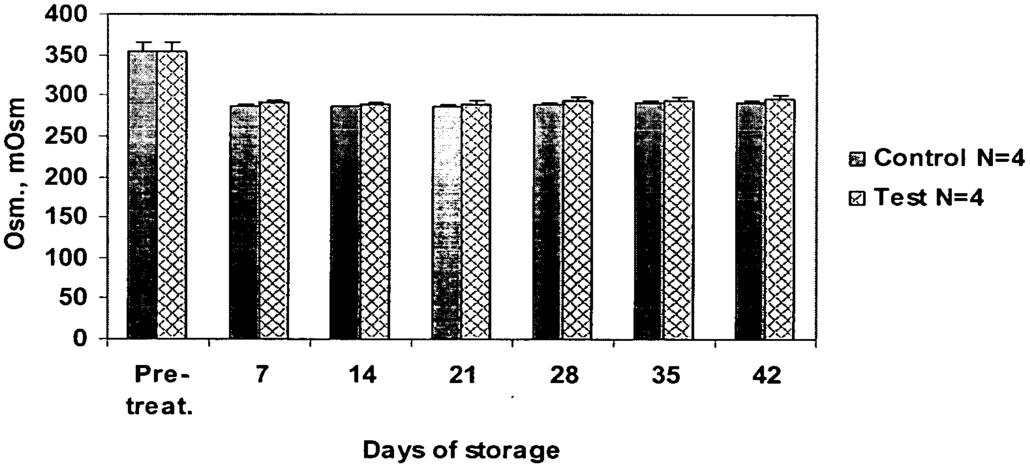
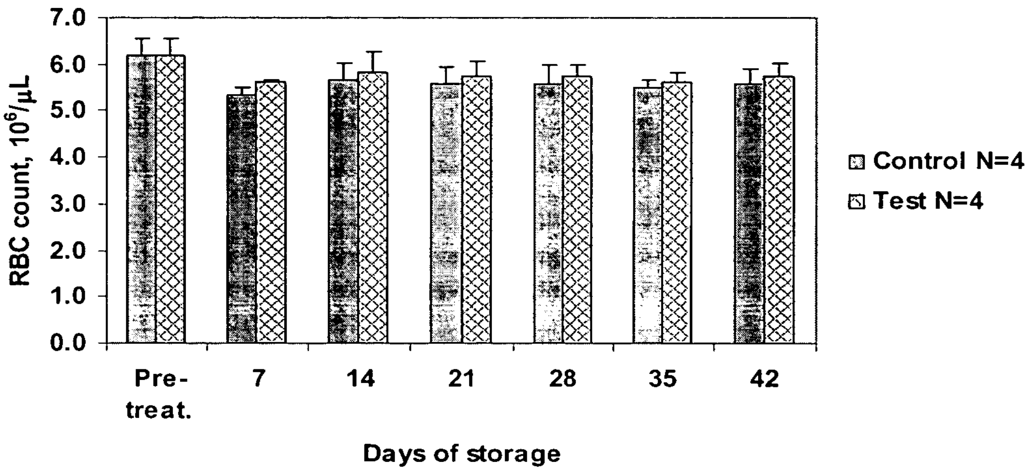


Figure 19. RBCC purified using CE column (Test) or automated washing (Control): RBC count during the storage



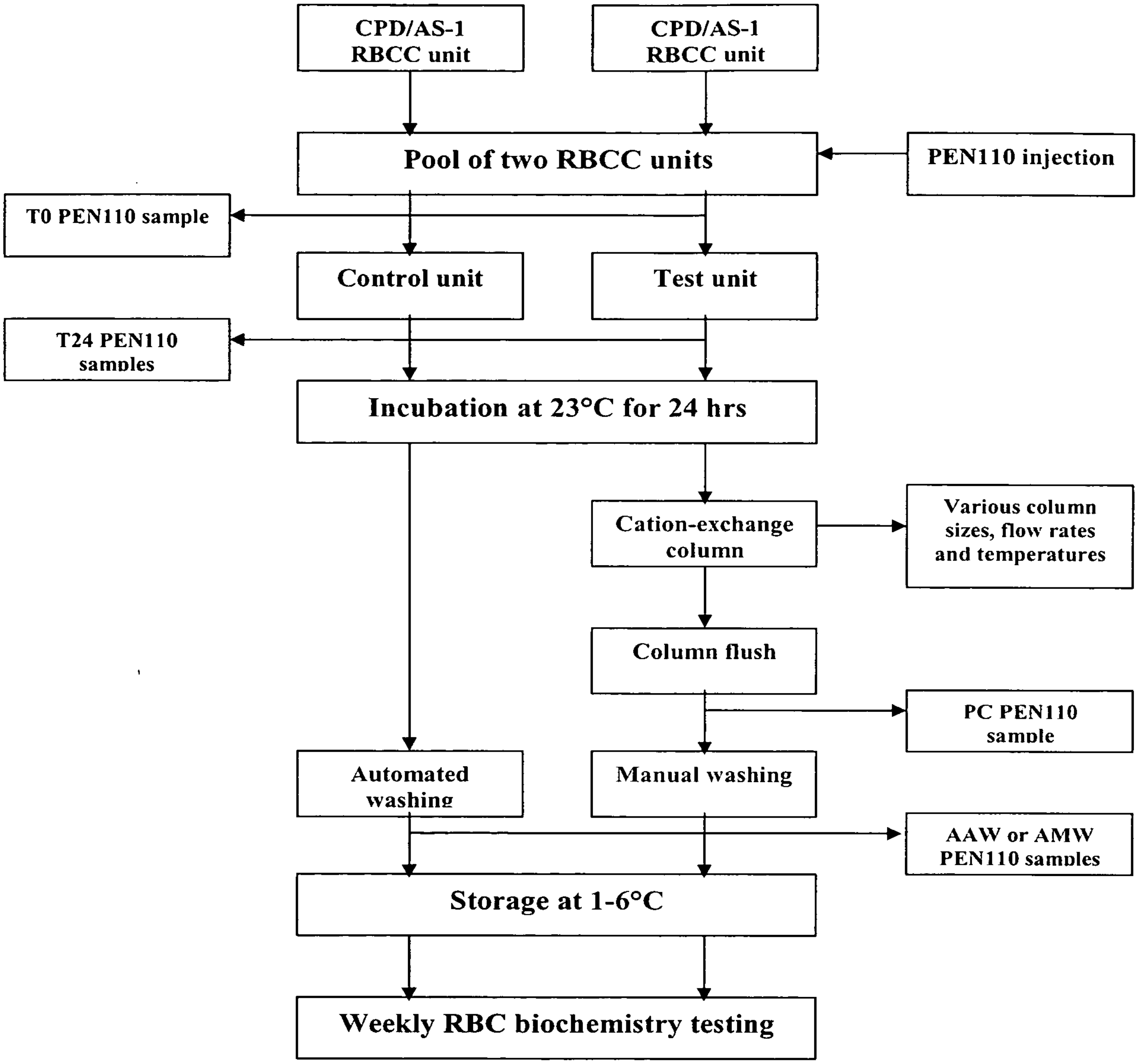

CPD/AS-1 RBCC unit
CPD/AS-1 RBCC unit
Pool of two RBCC units
PEN110 injection
T0 PEN110 sample
Control unit
Test unit
T24 PEN110 samples
Incubation at 23°C for 24 hrs
Cation-exchange column
Various column sizes, flow rates and temperatures
Column flush
PC PEN110 sample
Automated washing
Manual washing
AAW or AMW PEN110 samples
Storage at 1-6°C
Weekly RBC biochemistry testing

Fig. 20

Figure 21. Dowex 50Wx8 (strong cation exchanger) vs. Dowex MAC3 and Purolite C115 (w ak cati n xchangers)

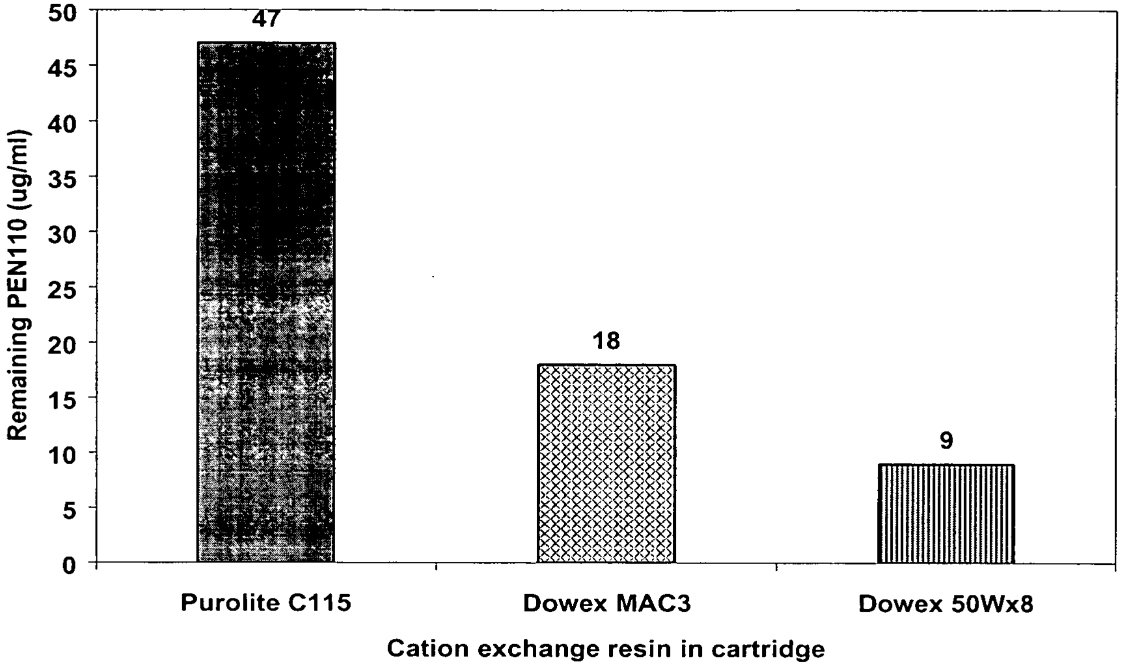


Figure 22. Removal of PEN110 from RBCC using fresh portions of Dowex 50Wx8 resin